

(FILE 'HOME' ENTERED AT 10:37:27 ON 23 MAR 2004)

FILE 'REGISTRY' ENTERED AT 10:37:38 ON 23 MAR 2004

L1 2 S SNX(W)14 OR SNX14

FILE 'CA' ENTERED AT 10:37:53 ON 23 MAR 2004

L2 5 S L1

L3 3 S SNX14 OR SNX(W)14

L4 66 S SORTING NEXIN

L1 ANSWER 1 OF 2 REGISTRY COPYRIGHT 2004 ACS on STN

RN 403638-75-5 REGISTRY

CN Protein SNX14 (sorting nexin 14) (human C-terminal fragment) (9CJ)***

(CA INDEX NAME)

OTHER NAMES:CN GenBank AAD27836 CN GenBank AAD27836 (Translated from: GenBank AF121863)

FS PROTEIN SEQUENCE MF Unspecified CI MAN SR CA LC STN Files: CA, CAPLUS

***RELATED SEQUENCES AVAILABLE WITH SEQLINK**

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

*** USE 'SQD' OR 'SQIDE' FORMATS TO DISPLAY SEQUENCE ***

1 REFERENCES IN FILE CA (1907 TO DATE)

1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L1 ANSWER 2 OF 2 REGISTRY COPYRIGHT 2004 ACS on STN

RN 392082-72-3 REGISTRY

CN DNA (human protein SNX14 (sorting nexin 13) C-terminal fragment-specifying cDNA plus 3'-flank) (9CJ)(CA INDEX NAME)

OTHER NAMES: CN 1077: PN: WO02070737 FIGURE: 6 unclaimed DNA CN

DNA (human gene SNX14 cDNA)

CN GenBank AF121863 FS NUCLEIC ACID SEQUENCE MF Unspecified CI MAN SR GenBank

LC STN Files: CA, CAPLUS, GENBANK, USPATFULL

***RELATED SEQUENCES AVAILABLE WITH SEQLINK**

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

*** USE 'SQD' OR 'SQIDE' FORMATS TO DISPLAY SEQUENCE ***

2 REFERENCES IN FILE CA (1907 TO DATE)

2 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L2 ANSWER 1 OF 5 CA COPYRIGHT 2004 ACS on STN

T1 Gene expression profiles relating to normal and osteoarthritic cartilage PY 2002 2002 2003 2004

L2 ANSWER 2 OF 5 CA COPYRIGHT 2004 ACS on STN

T1 A large family of endosome-localized proteins related to sorting nexin 1 PY 2001

L2 ANSWER 3 OF 5 CA COPYRIGHT 2004 ACS on STN

T1 Differentially expressed nucleic acids encoding tumor-associated proteins, kits, and methods for identification, assessment, prevention, and therapy of human prostate cancer PY 2001 2002 2002

L2 ANSWER 4 OF 5 CA COPYRIGHT 2004 ACS on STN

T1 Nucleic acid compositions, kits, and methods for identification, assessment, prevention, and therapy of human breast cancer PY 2001

L2 ANSWER 5 OF 5 CA COPYRIGHT 2004 ACS on STN

T1 Gene expression marker nucleic acids and proteins for identification, assessment, prevention, and therapy of ovarian cancer PY 2001

L3 ANSWER 1 OF 3 CA COPYRIGHT 2004 ACS on STN

T1 Sorting nexin-14, a gene expressed in motoneurons trapped by an in vitro preselection method

L3 ANSWER 2 OF 3 CA COPYRIGHT 2004 ACS on STN

T1 A large family of endosome-localized proteins related to sorting nexin 1

L3 ANSWER 3 OF 3 CA COPYRIGHT 2004 ACS on STN AN 136:148725 CA

T1 The consequences of chromosomal aneuploidy on gene expression profiles in a cell line model for prostate carcinogenesis

AU Phillips, John L.; Hayward, Simon W.; Wang, Yuzhuo; Vasselli, James; Pavlovich, Christian; Padilla-Nash, Hesse; Pezullo, John R.; Ghadimi, B. Michael; Grosfield, Gary D.; Rivera, Alexandra; Linehan, W. Maistron; Cunha, Gerald R.; Ried, Thomas

CS Urologic Oncology Branch, Center for Cancer Research, National Cancer Institute, NIH, Bethesda, MD, 20817, USA

SO Cancer Research (2001), 61(22): 8143-8149 CODEN: CNREA8; ISSN: 0008-5472 PB American Association for Cancer Research DT Journal LA English

AB Here the authors report the genetic characterization of immortalized prostate epithelial cells before and after conversion to tumorigenicity using mol. cytogenetics and microarray technol. The authors were particularly interested to analyze the consequences of acquired chromosomal aneuploidies with respect to modifications of gene expression profiles. Compared with nontumorigenic but immortalized prostate epithelium, prostate tumor cell lines showed high levels of chromosomal rearrangements that led to gains of 1p, 5, 11q, 12p, 16q, and 20q and losses of 1pter, 11p, 17, 20p, 21, 22, and Y. Of 5700 unique targets on a 6.5K cDNA microarray, approx.3% were subject to modification in expression levels; these included GRO-1, -2, IAP-1, -2, MMP-9, and cyclin D1, which showed increased expression, and TRAIL, BRCA1, and CTNNA, which showed decreased expression. Thirty % of expression changes occurred in regions the genomic copy no. of which remained balanced. Of the remainder, 42% of down-regulated and 51% of up-regulated genes mapped to regions present in decreased or increased genomic copy nos., resp. A relative gain or loss of a chromosome or chromosomal arm usually resulted in a statistically significant increase or decrease, resp., in the av. expression level of all of the genes on the chromosome. However, of these genes, very few (e.g., 5 of 101 genes on chromosome 11q), and in some instances only two genes (MMP-9 and PROC on chromosome 20q), were overexpressed by gtored 1.7-fold when scored individually. Cluster anal. by gene function suggests that prostate tumorigenesis in these cell line models involves alterations in gene expression that may favor invasion, prevent apoptosis, and promote growth.

RE.CNT 23 THERE ARE 23 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE REFORMAT

L4 ANSWER 1 OF 66 CA COPYRIGHT 2004 ACS on STN

T1 The beta-appendages of the four adaptor-protein (AP) complexes: Structure and binding properties, and identification of ***sorting*** **nixin*** 9 as an accessory protein to AP-2 PY 2002

L4 ANSWER 2 OF 66 CA COPYRIGHT 2004 ACS on STN

T1 Human prostate cancer marker genes associated with various metastatic stages identified by gene profiling, and related compositions, kits, and methods for diagnosis, prognosis and therapy PY 2004 2004

L4 ANSWER 3 OF 66 CA COPYRIGHT 2004 ACS on STN

T1 Human prostate cancer marker genes associated with various metastatic stages identified by gene profiling, and related compositions, kits, and methods for diagnosis, prognosis and therapy PY 2004 2004

L4 ANSWER 4 OF 66 CA COPYRIGHT 2004 ACS on STN

T1 Distinct in vitro interaction pattern of dopamine receptor subtypes with daptor proteins involved in post-endocytotic receptor targeting PY 2003

L4 ANSWER 5 OF 66 CA COPYRIGHT 2004 ACS on STN

T1 Crystal Structure of the Yeast Phox Homology (PX) Domain Protein Grd19p Complexed Phosphatidylinositol-3-phosphate PY 2003

L4 ANSWER 6 OF 66 CA COPYRIGHT 2004 ACS on STN

T1 Insulin stimulates movement of sorting nexin 9 between cellular compartments: a putative role mediating cell surface receptor expression and insulin action PY 2003

L4 ANSWER 7 OF 66 CA COPYRIGHT 2004 ACS on STN

T1 cDNA cloning and characterization of a novel SNX gene differentially expressed in preleukogenic oocytes of gibel carp PY 2003

L4 ANSWER 8 OF 66 CA COPYRIGHT 2004 ACS on STN

T1 ***Sorting*** **Nixin*** 9 Participates in Clathrin-mediated Endocytosis through Interactions with the Core Components PY 2003

L4 ANSWER 9 OF 66 CA COPYRIGHT 2004 ACS on STN

T1 Genes expressed in atherosclerotic tissue and their use in diagnosis and pharmacogenetics PY 2003 2003

L4 ANSWER 10 OF 66 CA COPYRIGHT 2004 ACS on STN

T1 Interaction of calmodulin, a sorting nexin and kinase-associated protein phosphatase with Brassica oleracea S locus receptor kinase PY 2003

L4 ANSWER 11 OF 66 CA COPYRIGHT 2004 ACS on STN

T1 Yeast two-hybrid screens imply involvement of Fanconi anemia proteins in transcription regulation, cell signaling, oxidative metabolism, and cellular transport PY 2003

L4 ANSWER 12 OF 66 CA COPYRIGHT 2004 ACS on STN

T1 Genetic studies of mouse sorting nexins 1 and 2 PY 2002

L4 ANSWER 13 OF 66 CA COPYRIGHT 2004 ACS on STN

T1 Evidence for a Role of SNX16 in Regulating Traffic between the Early and Late Endosomal Compartments PY 2003

L4 ANSWER 14 OF 66 CA COPYRIGHT 2004 ACS on STN

T1 Single nucleotide polymorphism genotyping to predict adverse drug reactions and efficacy strain therapy in patients with cardiovascular disease PY 2003

L4 ANSWER 15 OF 66 CA COPYRIGHT 2004 ACS on STN

T1 ***Sorting*** **nixin*** 4 and amphiphysin 2, a new partnership between endocytosis and intracellular trafficking PY 2003

L4 ANSWER 16 OF 66 CA COPYRIGHT 2004 ACS on STN

T1 Enterophilin-1, a new partner of ***Sorting*** **Nixin*** 1, decreases cell surface epidermal growth factor receptor PY 2003

L4 ANSWER 17 OF 66 CA COPYRIGHT 2004 ACS on STN

T1 Modified receptors on cell membranes for the discovery of therapeutic ligands PY 2003

L4 ANSWER 18 OF 66 CA COPYRIGHT 2004 ACS on STN

T1 Novel pharmaceutical composition of interferon gamma or pifenidone combined with molecular diagnostics for the improved treatment of interstitial lung diseases PY 2003 2003

L4 ANSWER 19 OF 66 CA COPYRIGHT 2004 ACS on STN

T1 Retomer and the sorting nexins Snx4/14/2 mediate distinct retrieval pathways from yeast endosomes PY 2003

L4 ANSWER 20 OF 66 CA COPYRIGHT 2004 ACS on STN

T1 Genes that are differentially expressed during erythropoiesis and their diagnostic and therapeutic uses PY 2003 2004 2004

L4 ANSWER 21 OF 66 CA COPYRIGHT 2004 ACS on STN

T1 Identification and characterisation of the gene TWIST NEIGHBOR (TWISTNB) located in the microdeletion syndrome 7p21 region PY 2002

L4 ANSWER 22 OF 66 CA COPYRIGHT 2004 ACS on STN	T1 ***Sorting*** **nixin*** 3 (SNX3) is disrupted in a patient with a translocation (t6:13)(q21;q12) and microcephaly, microphthalmia, ectrodactyly, progeria (MMEP) phenotype PY 2002
L4 ANSWER 23 OF 66 CA COPYRIGHT 2004 ACS on STN	T1 Genetic analysis of sorting nexins 1 and 2 reveals a redundant and essential function in mice PY 2002
L4 ANSWER 24 OF 66 CA COPYRIGHT 2004 ACS on STN	T1 The phox homol (PX) domain-dependent, 3-phosphoinositide mediated association of ***sorting*** **nixin*** -1 with an early sorting endosomal compartment is required for its ability to regulate epidermal growth factor receptor degradation PY 2002
L4 ANSWER 25 OF 66 CA COPYRIGHT 2004 ACS on STN	T1 Expression of a novel member of ***sorting*** **nixin*** gene family, SNX-L, in human liver development PY 2002
L4 ANSWER 26 OF 66 CA COPYRIGHT 2004 ACS on STN	T1 Sorting out the cellular functions of sorting nexins PY 2002
L4 ANSWER 27 OF 66 CA COPYRIGHT 2004 ACS on STN	T1 Pain-associated proteins and cDNAs and their use in pain diagnosis and screening for substances for treatment of pain PY 2003 2003 2003
L4 ANSWER 28 OF 66 CA COPYRIGHT 2004 ACS on STN	T1 The PX-domain protein SNX17 interacts with members of the LDL receptor family and modulates endocytosis of the LDL receptor PY 2002
L4 ANSWER 29 OF 66 CA COPYRIGHT 2004 ACS on STN	T1 Endocrine disruptor screening using DNA chips of endocrine disruptor-responsive genes PY 2002
L4 ANSWER 30 OF 66 CA COPYRIGHT 2004 ACS on STN	T1 Identification of the functional domains of yeast sorting nexins Vps5p and Vps17p PY 2002
L4 ANSWER 31 OF 66 CA COPYRIGHT 2004 ACS on STN	T1 Down-regulation of protease-activated receptor-1 is regulated by ***sorting*** **nixin*** 1 PY 2002
L4 ANSWER 32 OF 66 CA COPYRIGHT 2004 ACS on STN	T1 The identification and use of genes differentially expressed in ruptured and stable atherosclerotic plaques as markers for atherosclerosis PY 2002 2003 2004
L4 ANSWER 33 OF 66 CA COPYRIGHT 2004 ACS on STN	T1 Drosophila Ack targets its substrate, the sorting nexin DSH3PX1, to a protein complex involved in axonal guidance PY 2002
L4 ANSWER 34 OF 66 CA COPYRIGHT 2004 ACS on STN	T1 Endosomal localization and function of ***sorting*** **nixin*** 1 PY 2002
L4 ANSWER 35 OF 66 CA COPYRIGHT 2004 ACS on STN	T1 The Cdc42 target ACK2 interacts with sorting nexin*** 9 (SH3PX1) to regulate epidermal growth factor receptor degradation PY 2002
L4 ANSWER 36 OF 66 CA COPYRIGHT 2004 ACS on STN	T1 Pim-1 translocates ***sorting*** **nixin*** 6/TRAFA4-associated factor 2 from cytoplasm to nucleus PY 2001
L4 ANSWER 37 OF 66 CA COPYRIGHT 2004 ACS on STN	T1 ***Sorting*** **nixin*** -14, a gene expressed in motoneurons trapped by an in vitro preselection method PY 2001
L4 ANSWER 38 OF 66 CA COPYRIGHT 2004 ACS on STN	T1 Gene Expression Analysis in Human Monocytes, Monocyte-Derived Dendritic Cells, and .alpha.-Galactosylceramide-Pulsed Monocyte-Derived Dendritic Cells PY 2001
L4 ANSWER 39 OF 66 CA COPYRIGHT 2004 ACS on STN	T1 A large family of endosome-localized proteins related to ***sorting*** **nixin*** 1 PY 2001
L4 ANSWER 40 OF 66 CA COPYRIGHT 2004 ACS on STN	T1 Nucleic acid and corresponding protein named 188PH4 useful in the treatment and detection of bladder and other cancers PY 2002 2003 2003 2003
L4 ANSWER 41 OF 66 CA COPYRIGHT 2004 ACS on STN	T1 Association of mouse ***sorting*** **nixin*** 1 with early endosomes PY 2001
L4 ANSWER 42 OF 66 CA COPYRIGHT 2004 ACS on STN	T1 A molecular profile of the mouse gastric parietal cell with and without exposure to Helicobacter pylori PY 2001
L4 ANSWER 43 OF 66 CA COPYRIGHT 2004 ACS on STN	T1 The ***sorting*** **nixin***, DSH3PX1, connects the axonal guidance receptor, Discam, to the actin cytoskeleton PY 2001
L4 ANSWER 44 OF 66 CA COPYRIGHT 2004 ACS on STN	T1 Structural and functional characterization of the human gene for 1 (SNX1) PY 2001
L4 ANSWER 45 OF 66 CA COPYRIGHT 2004 ACS on STN	T1 RGS-PX1, a GAP for Galpha.s and ***sorting*** **nixin*** in vesicular trafficking PY 2001
L4 ANSWER 46 OF 66 CA COPYRIGHT 2004 ACS on STN	T1 The PX Domain as a Novel Phosphoinositide-Binding Module PY 2001
L4 ANSWER 47 OF 66 CA COPYRIGHT 2004 ACS on STN	T1 Sorting nexin*** 6, a novel SNX, interacts with the transforming growth factor-.beta. family of receptor serine-threonine kinases PY 2001
L4 ANSWER 48 OF 66 CA COPYRIGHT 2004 ACS on STN	T1 A New Member of the ***Sorting*** **Nixin*** Family Interacts with the C-Terminus of P-Selectin PY 2001
L4 ANSWER 49 OF 66 CA COPYRIGHT 2004 ACS on STN	T1 The human formin-binding protein 17 (FBP17) interacts with ***sorting*** **nixin***, SNX2, and is an MLL-fusion partner in acute myelogenous leukemia PY 2001
L4 ANSWER 50 OF 66 CA COPYRIGHT 2004 ACS on STN	T1 SNX3 regulates endosomal function through its PX-domain-mediated interaction with PtdIns(3)P PY 2001
L4 ANSWER 51 OF 66 CA COPYRIGHT 2004 ACS on STN	T1 Self-assembly and binding of a ***sorting*** **nixin*** to sorting endosomes PY 2001
L4 ANSWER 52 OF 66 CA COPYRIGHT 2004 ACS on STN	T1 Identification and characterization of SNX15, a novel ***sorting*** **nixin*** involved in protein trafficking PY 2001
L4 ANSWER 53 OF 66 CA COPYRIGHT 2004 ACS on STN	T1 Hrs interacts with ***sorting*** **nixin*** 1 and regulates degradation of epidermal growth factor receptor PY 2001
L4 ANSWER 54 OF 66 CA COPYRIGHT 2004 ACS on STN	T1 Human orthologs of yeast vacuolar protein sorting proteins Vps26, 29, and 35: assembly into multimeric complexes PY 2000
L4 ANSWER 55 OF 66 CA COPYRIGHT 2004 ACS on STN	T1 Functional annotation of a full-length mouse cDNA collection PY 2001
L4 ANSWER 56 OF 66 CA COPYRIGHT 2004 ACS on STN	T1 Functional annotation of a full-length mouse cDNA collection PY 2001
L4 ANSWER 57 OF 66 CA COPYRIGHT 2004 ACS on STN	T1 Overexpression of a novel ***sorting*** **nixin***, SNX15, affects endosome morphology and protein trafficking PY 2000
L4 ANSWER 58 OF 66 CA COPYRIGHT 2004 ACS on STN	

File 155:MEDLINE(R) 1966-2004/Mar W2 (c) format only 2004 The Dialog Corp.

Set Items Description

S1 0 SNX(W)14
S2 1 SORTING(W)NEXIN(W)14
S3 1 SNX14
S4 47 SORTING(W)NEXIN
S5 208 SNX?
S6 0 S5 NOT S4 AND NEXIN

2/5/1 DIALOG(R)File 155:MEDLINE(R) (c) format only 2004 The Dialog Corp. All rts. reserv.

11404964 PMID: 11500980

Sorting nexin -14, a gene expressed in motoneurons trapped by an in vitro preselection method.

Carroll P; Renoncourt Y; Gayet O; De Bovis B; Alonso S

INSERM U.322, Developmental Biology Institute of Marseille (IDM), CNRS/INSERM/Universite de la Mediterranee/AP de Marseille, Campus de Luminy, Marseille, France.

Developmental dynamics - an official publication of the American Association of Anatomists (United States) Aug 2001, 221 (4) p431-42, ISSN 1058-8388 Journal Code: 9201927 Document type: Journal Article Languages: ENGLISH Main Citation Owner: NLM Record type: Completed Subfile: INDEX MEDICUS

A gene-trap strategy was set up in embryonic stem (ES) cells with the aim of trapping genes expressed in restricted neuronal lineages. The vector used trap genes irrespective of their activity in undifferentiated totipotent ES cells. Clones were subjected individually to differentiation in a system in which ES cells differentiated into neurons. Two ES clones in which the trapped gene was expressed in ES-derived neurons were studied in detail. The corresponding cDNAs were cloned, sequenced, and analysed by in situ hybridisation on wild-type embryo sections. Both genes are expressed in the nervous system. One gene, YR-23, encodes a large intracellular protein of unknown function. The second clone, YR-14, represents a sorting nexin (SNX14) gene whose expression in vivo coincides with that of LIM-homeodomain Islet-1 in several tissues. Sorting nexins are proteins associated with the endoplasmic reticulum (ER) and may play a role in receptor trafficking. Gene trapping followed by screening based on in vitro preselection of differentiated ES recombinant clones, therefore, has the potential to identify integration events in subsets of genes before generation of mouse mutants. Copyright 2001 Wiley-Liss, Inc.

Descriptors: *Carrier Proteins--biosynthesis-BI; *Carrier Proteins --metabolism--ME; *Genetic Techniques; *Motor Neurons--metabolism--ME; Animals; Base Sequence; Carrier Proteins--genetics--GE; Cell Differentiation; Cells, Cultured; Cloning, Molecular; DNA; Complementary --metabolism--ME; Databases, Factual; Digoxigenin--pharmacology--PD; Electroporation; Embryo--metabolism--ME; Endoplasmic Reticulum--metabolism --ME; Exons; Galactosides--metabolism--ME; Gene Expression Regulation, Developmental; Genetic Vectors; In Situ Hybridization; Indoles--metabolism --ME; Introns; Lac Operon; Mice; Models, Genetic; Molecular Sequence Data; Nervous System--embryology--EM; Neurons--metabolism--ME; Protein Structure, Tertiary; Sequence Analysis, DNA; Sequence Homology, Nucleic Acid; Stem Cells--metabolism--ME; Time Factors CAS Registry No.: 0 (Carrier Proteins); 0 (DNA, Complementary); 0 (Galactosides); 0 (Genetic Vectors); 0 (Indoles); 0 (sorting nexin-14); 1672-46-4 (Digoxigenin); 7240-90-6 (5-bromo-4-chloro-3-indolyl beta-galactoside)

Record Date Created: 20010813 Record Date Completed: 20011101

3/6/1 11404964 PMID: 11500980

Sorting nexin-14, a gene expressed in motoneurons trapped by an in vitro preselection method. Aug 2001

4/6/1 15835943 PMID: 14630935

Enterophillin-1 interacts with focal adhesion kinase and decreases beta1 integrins in intestinal Caco-2 cells. Mar 5 2004

4/6/2 15777287 PMID: 14679214

A novel proteomic screen for Peptide-protein interactions. Mar 12 2004

4/6/3 15773309 PMID: 14706863

Distinct in vitro interaction pattern of dopamine receptor subtypes with adaptor proteins involved in post-endocytotic receptor targeting. Jan 2 2004

4/6/4 15748193 PMID: 14993925

The BAR-domain family of proteins: a case of bending and binding? Mar 2004

4/6/5 15663525 PMID: 12952949

Sorting nexin 9 participates in clathrin-mediated endocytosis through interactions with the core components. Nov 21 2003

4/6/6 15511688 PMID: 14555783

Interaction of calmodulin, a sorting nexin and kinase-associated protein phosphatase with the Brassica oleracea S locus receptor kinase. Oct 2003

4/6/7 15502055 PMID: 12668730

Sorting nexin 4 and amphiphysin 2, a new partnership between endocytosis and intracellular trafficking. May 15 2003

4/6/8 15455611 PMID: 14514667

Crystal structure of the yeast Phox homology (PX) domain protein Grd19p complexed to phosphatidylinositol-3-phosphate. Dec 12 2003

4/6/9 15276764 PMID: 12917015

Insulin stimulates movement of sorting nexin 9 between cellular compartments: a putative role mediating cell surface receptor expression and insulin action. Nov 15 2003

4/6/10 15248516 PMID: 14502124

A proline-rich domain in the gamma subunit of phosphodiesterase 6 mediates interaction with SH3-containing proteins. Sep 18 2003

4/6/11 15218203 PMID: 14602153

cDNA cloning and characterization of a novel SNX gene differentially expressed in previtellogenic oocytes of gibel carp. Nov 2003

4/6/12 14123771 PMID: 9819414

Identification of a family of sorting nexin molecules and characterization of their association with receptors. Dec 1998

4/6/13 13599887 PMID: 9285823

A sorting nexin -1 homologue, Vps5p, forms a complex with Vps17p and is required for recycling the vacuolar protein-sorting receptor. Aug 19

4/6/14 13490007 PMID: 9175702

The yeast VPS5/GRD2 gene encodes a sorting nexin -1-like protein required for localizing membrane proteins to the late Golgi. May 1993

4/6/15 13261145 PMID: 8931154

Novel domains in NADPH oxidase subunits, sorting nexins, and PtdIns 3-kinases: binding partners of SH3 domains? Nov 1996

4/6/16 12955658 PMID: 8638121

Enhanced degradation of EGF receptors by a sorting nexin , SNX1. May 17 1996

4/6/17 12491266 PMID: 12813048

Evidence for a role of SNX16 in regulating traffic between the early and later endosomal compartments. Sep 5 2003

4/6/18 12391171 PMID: 12667642

Enterophillin-1, a new partner of sorting nexin 1, decreases cell surface epidermal growth factor receptor. Jun 6 2003

4/6/19 12212666 PMID: 12554555

Retromer and the sorting nexins Snx4/41/42 mediate distinct retrieval pathways from yeast endosomes. Feb 3 2003

4/6/20 12139950 PMID: 12471201

Sorting nexin 3 (SNX3) is disrupted in a patient with a translocation (6;13)(q21;q12) and microcephaly, microphthalmia, ectrodactyly, prognathism (MMEPE) phenotype. Dec 2002

4/6/21 12139668 PMID: 12198132

The phox homology (PX) domain-dependent, 3-phosphoinositide-mediated association of sorting nexin -1 with an early sorting endosomal compartment is required for its ability to regulate epidermal growth factor receptor degradation. Dec 13 2002

4/6/22 12128860 PMID: 12459172

Expression of a novel member of sorting nexin gene family, SNX-L, in human liver development. Dec 13 2002

4/6/23 12109705 PMID: 12438708

Identification and characterisation of the gene TWIST NEIGHBOR (TWISTNB) located in the microdeletion syndrome 7p21 region. 2002

4/6/24 12073960 PMID: 12388759

Genetic analysis of sorting nexins 1 and 2 reveals a redundant and essential function in mice. Oct 2002

4/6/25 11939521 PMID: 12142517

Cell biology. A last GASP for GPCRs? Jul 26 2002

4/6/26 11865168 PMID: 12058063

Down-regulation of protease-activated receptor-1 is regulated by sorting nexin 1. Jun 2002

4/6/27 11823305 PMID: 11997453

Endosomal localization and function of sorting nexin 1. May 14 2002

4/6/28 11722411 PMID: 11799118

The Cdc42 target ACK2 interacts with sorting nexin 9 (SH-3PX1) to regulate epidermal growth factor receptor degradation. Mar 22 2002

4/6/29 11711330 PMID: 11773052

Drosophila Ack targets its substrate, the sorting nexin DSH3PX1, to a protein complex involved in axonal guidance. Mar 15 2002

4/6/30 11704385 PMID: 11879186

The beta-appendages of the four adaptor-protein (AP) complexes: structure and binding properties, and identification of sorting nexin 9 as accessory protein to AP-2. Mar 15 2002

associated with cellular membranes. They are widely expressed, although the tissue distribution of each sorting nexin mRNA varies. When expressed in COS7 cells, epitope-tagged sorting nexins SNX1, SNX1A, SNX2, and SNX4 coimmunoprecipitated with receptor tyrosine kinases for EGF, platelet-derived growth factor, and insulin. These sorting nexins also associated with the long isoform of the leptin receptor but not with the short and medium isoforms. Interestingly, endogenous COS7 transferrin receptors associated exclusively with SNX1 and SNX1A, while SNX3 was not found to associate with any of the receptors studied. Our demonstration of a large conserved family of sorting nexins that interact with a variety of receptor types suggests that these proteins may be involved in several stages of intracellular trafficking in mammalian cells.

Tags: Human Descriptors: *Carrier Proteins--chemistry--CH; *Receptor, Epidermal Growth Factor--metabolism--ME; Alternative Splicing--GE; Amino Acid Sequence, Animals; Carrier Proteins--physiology--PH; Cell Membrane --metabolism--ME; Cells, Cultured; Cloning--GE; Fungal Proteins --chemistry--CH; Helminth Proteins--chemistry--CH; Molecular Sequence Data; Protein Binding--physiology--PH; RNA, Messenger--genetics--GE; Receptors, Cell Surface--metabolism--ME; Sequence Analysis, DNA; Sequence Homology, Amino Acid; Molecular Sequence Databank No.: GENBANK/AF065485 CAS Registry No.: 0 (Carrier Proteins); 0 (Fungal Proteins); 0 (Helminth Proteins); 0 (RNA, Messenger); 0 (Receptors, Cell Surface); 0 (protease-nexin); 0 (sorting nexin 1) Enzyme No.: EC 2.7.1.112 (Receptor Epidermal Growth Factor) Record Date Created: 19981224 Record Date Completed: 19981224

4/7/32 DIALOG(R)File 155:MEDLINE(R) (c) format only 2004 The Dialog Corp. All rts. reserv.

11558198 PMID: 11729293

Signal transduction. A new thread in an intricate web.

von Zastrow M; Mostov K

Departments of Psychiatry, University of California, San Francisco, CA 94143, USA. zastrow@itsa.ucsf.edu
Science (United States) Nov 30 2001, 294 (5548) p1845-7, ISSN 0036-8075 Journal Code: 0404511 Comment 0
Science. 2001 Nov 30;294(5548) 1939-42; Comment on PMID 11729332 Document type: Comment; Journal Article
Languages: ENGLISH Main Citation Owner: NLM Record type: Completed

Understanding how biochemical pathways are connected in the cell is one of the big challenges facing cell biologists. In a Perspective, von Zastrow and Mostov describe new work that identifies a protein called RGS-PX1 as the linchpin that connects signal transduction activated by G protein-coupled receptors with membrane trafficking events. Record Date Created: 20011130 Record Date Completed: 20011231

4/7/37 DIALOG(R)File 155:MEDLINE(R) (c) format only 2004 The Dialog Corp. All rts. reserv.

11392214 PMID: 11485546

A large family of endosome-localized proteins related to sorting nexin 1.

Teadale R D; Lodi D; Houghton F; Karlsson L; Gleeson P A

R.W. Johnson Pharmaceutical Research Institute, 3210 Merryfield Row, San Diego, CA 92121, USA. r.teasdale@imb.uq.edu.au
Biochemical journal (England) Aug 15 2001, 358 (Pt 1) p7-16, ISSN 0264-6021 Journal Code: 2984726R Document type: Journal Article Languages: ENGLISH Main Citation Owner: NLM Record type: Completed

Sorting nexin 1 (SNX1), a peripheral membrane protein, has previously been shown to regulate the cell-surface expression of the human epidermal growth factor receptor [Kurten, Cadena and Gill (1996) Science 272, 1008-1010]. Searches of human expressed sequence tag databases with SNX1 revealed eleven related human cDNA sequences, termed SNX2 to SNX12, eig of them novel. Analysis of SNX1-related sequences in the Saccharomyces cerevisiae genome clearly shows a greatly expanded SNX family in humans in comparison with yeast. On the basis of the predicted protein sequences, all members of this family o hydrophilic molecules contain a conserved 70-110-residue Phox homology (PX) domain, referred to as the SNX-PX domain. Within the SNX family, subgroups were identified on the basis of the sequence similarities of the SNX-PX domain and the ove domain structure of each protein. The members of one subgroup, which includes human SNX1, SNX2, SNX4, SNX5 and SNX and the yeast Vps5p and YJL036W, all contain coiled-coil regions within their large C-terminal domains and are found distribu in both membrane and cytosolic fractions, typical of hydrophilic peripheral membrane proteins. Localization of the human SNX subgroup members in HeLa cells transfected with the full-length cDNA species revealed a similar intracellular distribution that all cases overlapped substantially with the early endosome marker, early endosome autoantigen 1. The intracellular localization of deletion mutants and fusions with green fluorescent protein showed that the C-terminal regions of SNX1 and SNX5 are responsible for their endosomal localization. On the basis of these results, the functions of these SNX molecules are likely to be unique to endosomes, mediated in part by interactions with SNX-specific C-terminal sequences and membrane-associated determinants. Record Date Created: 20010803 Record Date Completed: 20010920

23mar04 10:33:35 User208600 Session D1621.2

File 5:BIOSIS Previews(R) 1969-2004/Mar W2

(c) 2004 BIOSIS

Set	Items	Description
S1	0	SNX(W)14
S2	1	SORTING(W)NEXIN(W)14
S3	1	SNX14
S4	68	SORTING(W)NEXIN

4/6/31 11558226 PMID: 11729322
RGS-PX1, a GAP for GalphaS and sorting nexin in vesicular trafficking. Nov 30 2001

4/6/32 11558198 PMID: 11729293
Signal transduction. A new thread in an intricate web. Nov 30 2001

4/6/33 11555780 PMID: 11726276
Association of mouse sorting nexin 1 with early endosomes. Dec 2001

4/6/34 11525585 PMID: 11564816
The sorting nexin 1, DSH3PX1, connects the axonal guidance receptor, Dscam, to the actin cytoskeleton. Nov 9 2001

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Sorting nexin 6, a novel SNX, interacts with the transforming growth factor-beta family of receptor serine-threonine kinases. Jun 1 2001

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Hrs interacts with sorting nexin 1 and regulates degradation of epidermal growth factor receptor. Mar 9 2001

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Identification and characterization of SNX15, a novel sorting nexin involved in protein trafficking. Feb 16 2001

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A new member of the sorting nexin family interacts with the C-terminus of P-selectin. Mar 9 2001

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Overexpression of a novel sorting nexin, SNX15, affects endomorphology and protein trafficking. Nov 2000

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Human orthologs of yeast vacuolar protein sorting proteins Vps26, 29, and 35 assembly into multimeric complexes. Dec 2000

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SNX5, a new member of the sorting nexin family, binds to the Fanconi anemia complementation group A protein. Nov 30 1999

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14123771 PMID: 9819414

Identification of a family of sorting nexin molecules and characterization of their association with receptors.

Haft C R; de la Luz Sierra M; Barr V A; Haft D H; Taylor S I

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Molecular and cellular biology (UNITED STATES) Dec 1998, 18 (12) p7278-87, ISSN 0270-7306 Journal Code: 8109087 Document type: Journal Article Languages: ENGLISH Main Citation Owner: NLM Record type: Completed
Subtitle: INDEX MEDICUS

Sorting nexin 1 (SNX1) is a protein that binds to the epidermal growth factor (EGF) receptor and is proposed to play a role in directing EGF receptors to lysosomes for degradation (R. C. Kurten, D. L. Cadena, and G. N. Gill, Science 272:1008-1010, 1996). We have obtained full-length cDNAs and deduced the amino acid sequences of three novel homologous proteins, which were denoted human sorting nexins (SNX2, SNX3, and SNX4). In addition, we identified a presumed splice variant isoform of SNX1 (SNX1A). These molecules contain a conserved domain of approximately 100 amino acids, which was termed the phox homology (PX) domain. Human SNX1 (522 amino acids), SNX1A (457 amino acids), SNX2 (519 amino acids), SNX3 (162 amino acids), and SNX4 (450 amino acids) are part of a larger family of hydrophilic molecules including proteins identified in Caenorhabditis elegans and Saccharomyces cerevisiae. Despite their hydrophilic nature, the sorting nexins are found partially

S5 287 SNX?

S6 1 S5 NOT S4 AND NEXIN

4/6/1 0014725787 BIOSIS NO.: 200400096544
A proline-rich domain in the gamma subunit of phosphodiesterase δ mediates interaction with SH3-containing proteins. 2003

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Sorting nexins (SNX) 1 and 2: Interaction domains involved in self-association and associations with human retromer proteins 1999

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Identification and characterization of SNX15, a novel PX domain containing protein 1999

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Sorting nexin 1 in epidermal growth factor receptor trafficking 1998

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Cloning and characterization of three novel human sorting nexin molecules 1997

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A sorting nexin -1 homologue, Vps5p, forms a complex with Vps17p and is required for recycling the vacuolar protein-sorting receptor 1997

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The yeast VPS5/GRD2 gene encodes a sorting nexin -1-like protein required for localizing membrane proteins to the late Golgi 1997

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The yeast GRD2 gene encodes a sorting nexin -like protein required for Golgi retention and vacuolar protein sorting 1996

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Identification of a second sorting nexin (SNX2) closely related to SNX1: a molecule that down regulates EGF receptors 1996

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Novel domains in NADPH oxidase subunits, sorting nexins, and PtdIns 3-kinases: Binding partners of SH3 domains? 1996

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Enhanced degradation of EGF receptors by a sorting nexin., SNX1 1996

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0014207384 BIOSIS NO.: 200300166103
Role of sorting nexins in protease-activated receptor-1 trafficking.
AUTHOR: Garrett T A (Reprint); Trejo J (Reprint)
AUTHOR ADDRESS: Pharmacology, University of North Carolina at Chapel Hill, Chapel Hill, NC, USA**USA
JOURNAL: Molecular Biology of the Cell 13 (Supplement): p134a-135a Nov. 2002 2002 MEDIUM: print
CONFERENCE/MEETING: 42nd Annual Meeting of the American Society for Cell Biology San Francisco, CA, USA Decemb
14-18, 2002; 20021214 SPONSOR: American Society for Cell Biology ISSN: 1059-1524 DOCUMENT TYPE: Meeting; Meeti
Abstract RECORD TYPE: Citation LANGUAGE: English

4/7/23 DIALOG(R)File 5:BIosis Previews(R) (c) 2004 BIOSIS. All rts. reserv.
0013907553 BIOSIS NO.: 200200501064
Membrane transport: A coat for ubiquitin
AUTHOR: Clague Michael J (Reprint)
AUTHOR ADDRESS: Physiological Laboratory, University of Liverpool, Crown Street, Liverpool, L69 3BX, UK**UK
JOURNAL: Current Biology 12 (15): pR529-R531 August 6, 2002 2002 MEDIUM: print ISSN: 0960-9822
DOCUMENT TYPE: Article RECORD TYPE: Abstract LANGUAGE: English
ABSTRACT: Lysosomally directed receptors are concentrated at a 'bilaayered' clathrin coat on the face of sorting endosomes
This coat is highly enriched in Hrs protein, which can potentially serve as an adaptor between ubiquitinated receptors and clathrin.

4/7/34 DIALOG(R)File 5:BIosis Previews(R) (c) 2004 BIOSIS. All rts. reserv.
0013551097 BIOSIS NO.: 200200154608
Interactions among sorting nexins
AUTHOR: Gill Gordon N (Reprint); Lazar Cheri S; Yeo Michele; Zhong Qi; Meerloo Timo
AUTHOR ADDRESS: Medicine/Endocrinology, Univ. CA San Diego, 9500 Gilman Drive, La Jolla, CA, 92093-0650, USA**US
JOURNAL: Molecular Biology of the Cell 11 (Supplement): p214a-215a Dec., 2000 2000 MEDIUM: print
CONFERENCE/MEETING: 40th American Society for Cell Biology Annual Meeting San Francisco, CA, USA December 09-13
2000; 20001209 SPONSOR: American Society for Cell Biology ISSN: 1059-1524 DOCUMENT TYPE: Meeting; Meeting
Abstract RECORD TYPE: Citation LANGUAGE: English

4/7/48 DIALOG(R)File 5:BIosis Previews(R) (c) 2004 BIOSIS. All rts. reserv.
0013106557 BIOSIS NO.: 200100278396
Self-assembly and binding of a sorting nexin to sorting endosomes
AUTHOR: Kurten Richard C (Reprint); Eddington Anthony D; Chowdhury Parag; Smith Richard D; Davidson April D; Shank Brian B
AUTHOR ADDRESS: Department of Physiology and Biophysics and Arkansas Cancer Research Center, University of Arkansas for Medical Sciences, 4301 West Markham Street, Little Rock, AR, 72205-0750, USA**USA
JOURNAL: Journal of Cell Science 114 (9): p1743-1755 May, 2001 2001 MEDIUM: print ISSN: 0021-9533 DOCUMENT TYPE Article RECORD TYPE: Abstract LANGUAGE: English
ABSTRACT: The fate of endocytosed membrane proteins and luminal contents is determined by a materials processing system in sorting endosomes. Endosomal retention is a mechanism that traps specific proteins within this compartment, and thereby prevents their recycling. We report that a sorting nexin SNX1, a candidate endosomal retention protein, self-assembles in vitro and in vivo, and has this property in common with its yeast homologue Vps5p. A comparison of SNX1 expressed in bacterial and in mammalian systems and analyzed by size-exclusion chromatography indicates that in cytosol SNX1 tetramers are part of a larger complex with additional proteins. An endosomal retention function would require that SNX1 bind to endosomal membranes, yet the complexes that we analyzed were largely soluble and little SNX1 was found in pellet fractions. Using green fluorescent protein fusions, endocytic compartment markers and fluorescence recovery after photobleaching, we found that there is an equilibrium between free cytoplasmic and early/sorting endosome-bound pools of green fluorescent protein-SNX1. Fluorescence resonance energy transfer indicated that spectral variants of green fluorescent protein-SNX1 were oligomeric in vivo. In cell extracts, these green fluorescent protein-SNX1 oligomers corresponded to tetrameric and larger complexes of green fluorescent protein-SNX1. Using video microscopy, we observed small vesicle docking and tubule budding from large green fluorescent protein-SNX1 coated endosomes, which are features consistent with their role as sorting endosomes.

4/7/52 DIALOG(R)File 5:BIosis Previews(R) (c) 2004 BIOSIS. All rts. reserv.
0012955010 BIOSIS NO.: 200100126849
Human orthologs of yeast vacuolar protein sorting proteins Vps26, 29, and 35: Assembly into multimetric complexes
AUTHOR: Haft Carol Renfrew (Reprint); Sierra Maria de la Luz; Balford Richard; Lesniak Maxine A; Barr Valerie A; Taylor Simeon I

AUTHOR ADDRESS: Diabetes Branch, National Institutes of Diabetes and Digestive and Kidney Diseases, National Institutes of Health, Bethesda, MD, 20892-1770, USA**USA
JOURNAL: Molecular Biology of the Cell 11 (12): p4105-4116 December, 2000 2000 MEDIUM: print ISSN: 1059-1524
DOCUMENT TYPE: Article RECORD TYPE: Abstract LANGUAGE: English
ABSTRACT: Sorting nexin (SNX) 1 and SNX2 are mammalian orthologs of Vps5p, a yeast protein that is a subunit of a large multimeric complex, termed the retromer complex, involved in retrograde transport of proteins from endosomes to the trans-Golgi network. We report the cloning and characterization of human orthologs of three additional components of the complex: Vps26p, Vps29p, and Vps35p. The close structural similarity between the yeast and human proteins suggests a similarity in function. We used both yeast two-hybrid assays and expression in mammalian cells to define the binding interactions among these proteins. The data suggest a model in which hVps35 serves as the core of a multimeric complex by binding directly to hVps26, hVps29, and SNX1. Deletion analyses of hVps35 demonstrate that amino acid residues 1-53 and 307-796 of hVps35 bind to the coiled-coil-containing domain of SNX1. In contrast, hVps26 binds to amino acid residues 1-172 of hVps35, whereas hVps29 binds to amino acid residues 307-796 of hVps35. Furthermore, hVps35, hVps29, and hVps26 have been found in membrane-associated and cytosolic compartments. Gel filtration chromatography of COS7 cell cytosol showed that both recombinant and endogenous hVps35, hVps29, and hVps26 coelute as a large complex (approx220-440 kDa). In the absence of hVps35, neither hVps26 nor hVps29 is found in the large complex. These data provide the first insights into the binding interactions among subunits of a putative mammalian retromer complex.

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0011227633 BIOSIS NO.: 199800021880

Cloning and characterization of three novel human sorting nexin molecules

AUTHOR: Haft C Renfrew; Sierra L; Sherman J; Kulansky R; Taylor S I

AUTHOR ADDRESS: Diabetes Branch, NIDDK, Natl. Inst. Health, Bethesda, MD 20892, USA**USA

JOURNAL: Molecular Biology of the Cell 8 (SUPPL.): p422A Nov., 1997 1997 MEDIUM: print

CONFERENCE/MEETING: 37th Annual Meeting of the American Society for Cell Biology Washington, D.C., USA December 13-17, 1997: 19971213 SPONSOR: American Society for Cell Biology ISSN: 1059-1524 DOCUMENT TYPE: Meeting: Meeting Abstract: Meeting Poster RECORD TYPE: Citation LANGUAGE: English

4/7/66 DIALOG(R)File 5:Biocis Previews(R) (c) 2004 BIOSIS. All rts. reserv.

0010760232 BIOSIS NO.: 199799394292

Identification of a second sorting nexin (SNX2) closely related to SNX1, a molecule that down regulates EGF receptors

AUTHOR: Kurten Richard C; Leychik Yan; Gill Gordon N

AUTHOR ADDRESS: Dep. Med., Univ. California San Diego, La Jolla, Ca 92093, USA**USA

JOURNAL: Molecular Biology of the Cell 7 (SUPPL.): p134A 1996 1996 CONFERENCE/MEETING: Annual Meeting of the 6th International Congress on Cell Biology and the 36th American Society for Cell Biology San Francisco, California, USA December 7-11, 1996: 19961207 ISSN: 1059-1524 DOCUMENT TYPE: Meeting: Meeting Abstract: Meeting Poster RECORD TYPE: Citation LANGUAGE: English

4/7/67 DIALOG(R)File 5:Biocis Previews(R) (c) 2004 BIOSIS. All rts. reserv.

0010662069 BIOSIS NO.: 199799296129

Novel domains in NADPH oxidase subunits, sorting nexins, and PtdIns 3-kinases: Binding partners of SH3 domains?

AUTHOR: Ponting Christopher P

AUTHOR ADDRESS: Univ. Oxford, Fibriolysis Res. Unit, Old Observatory, South Parks Rd., Oxford OX1 3BH, UK**UK

JOURNAL: Protein Science 5 (11): p2353-2357 1996 1996 ISSN: 0961-8368

DOCUMENT TYPE: Article RECORD TYPE: Abstract LANGUAGE: English

ABSTRACT: Two SH3 domain-containing cytosolic components of the NADPH oxidase, p47-phox and p40-phox, are shown by analyses of their sequences to contain single copies of a novel class of domain, the PX (phox) domain. Homologous domains are demonstrated to be present in the Cpx class of phosphatidylinositol 3-kinase, S. cerevisiae Bem1p, and S. pombe Sod2, and a large family of human sorting nexin 1 (SNX1) homologues. The majority of these domains contains a polyproline motif, typical of SH3 domain-binding proteins. Two further findings are reported. A third NADPH oxidase subunit, p67-phox, is shown to contain four tetrapeptide repeats (TPRs) within its N-terminal Rac1-GTP-binding region, and a 28 residue motif in p40-phox is demonstrated to be present in protein kinase C isoforms α and λ and zeta, and in three ZZ domain-containing proteins.

6/6/1 0013047941 BIOSIS NO.: 200100219780

Cloning and functional characterisation of a new MLL fusion gene located at 9q34 2001